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More scientific news from Los Angeles ACS meeting

OCTOBER 17, 1988

CHEMICAL & ENGINEERING

NEWS

Candidates' Views

Dukakis and Bush discuss science issues

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News of the Week

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■ **First commercial license of superconductivity technology by federal lab is granted to Massachusetts firm.** **Page 5**

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■ **Department of Energy announces plans to speed startup of Savannah River nuclear reactors, shut down since August for safety reasons.** **Page 6**

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LETTERS

Valid public concerns

SIR: This is in response to R. Thomas Myers' letter (C&EN, July 18, page 2) under the heading, "Environmental issue." Although I agree, in general, with Myers' description of the four phases of industrial environmental concern and reaction, the key phrase, in his reference to a previous letter in C&EN by Robert D. Kennedy (C&EN, May 23, page 3), is "valid public concern."

Just what constitutes a valid concern is usually the thorny part of these issues; for example, valid by what and whose criteria? Is the fluoride ion-drinking water issue a valid concern? Is the use of animals for the testing of drugs and pharmaceuticals a valid concern?

I feel that during Myers' "phase 1" and "phase 2," the chemical industry is (again, speaking generally) attempting to determine logically the true validity of the public concern(s). Our growing public chemophobia must be met with scientific patience, respect, and reasoning and not with panic and overreaction.

Richard D. Stacy
Tucson, Ariz.

First chemistry encounter

SIR: I was surprised, though not a lot, to read the comments addressed to the Carleton College Conference of the Council on Undergraduate Research by Erich Bloch, director of the National Science Foundation (C&EN, Aug. 8, page 28). Though most engineers may end formal education with the bachelor degree, such is certainly not the case with chemists. It is almost entirely untrue when one considers the careers of those carrying out research in universities or in industry. Though it is, in the abstract, a danger that small schools in the U.S. might think research more important than teaching in some far-off future, the danger is so remote that we needn't worry about it in this century or the next. What we do need to worry about is the ever-decreasing supply of American undergraduates choosing professional careers as research chemists. In that context, the smaller non-Ph.D.-granting institutions play a most important role, and undergraduate research is their bread and butter.

Anyone who has participated in the preprofessional education of chemistry students knows how significant an undergraduate research experience can be for the students who claim they wish to be chemists. It provides a young person with the first real encounter with what it means to be a chemist. Some thrive, some flounder. But in discovering that not every problem has a right answer, or any answer, the student encounters valuable lessons. Undergraduate research also provides chemistry majors with identity—an identity with the subject and with the profession. This, too, is valuable, for it gives the group of chemists-to-be a spirit and a closeness to the subject. In smaller colleges, undergraduate research is the only game in town. Faculty members in four-year and non-Ph.D.-granting institutions desperately need it to survive intellectually over the course of their careers. That they are able to nurture their own intellectual curiosity and provide undergraduates with exciting, almost tutorial instruction, is also extremely important and of added benefit to the profession. This faculty interest alone can, at times, encourage a young person to consider a career in our subject rather than another. Above all, however, undergraduate research is the one unique way that U.S. colleges and universities can encourage the scientifically skilled to choose chemistry as a career. There's nothing wrong with that as near as I can tell. Chemistry remains an experimental science, and the only thing we have going for us as a discipline that differs from any other is the experimental laboratory work, which is the unique domain of our chosen profession.

In recent years the National Science Foundation, National Institutes of Health, and the Department of Defense have all recognized the value of research with undergraduates and research in predominantly undergraduate institutions by establishing new programs—rather small by their standards—to support projects and people in four-year colleges and non-Ph.D.-granting schools. These important steps

Corrections

- Sept. 19, page 18: Avtex Fibers sold its interest in a South African wood pulp operation to a consortium represented by Sappi Ltd., a publicly owned South African pulp and paper producer, not to the South African government.

- Sept. 12, page 29: The Engineering Research Center for Advanced Electronic Materials Processing is located at North Carolina State University, Raleigh, under the direction of Nino A. Masnari.

STOCK MARKET: Chemicals outperform other issues

Shortages of basic chemicals such as ethylene, styrene, and caustic soda, stable or lower feedstock prices, and a weak U.S. dollar that has helped increase overseas demand for U.S. chemicals have recently helped increase many chemical companies' sales and profits, and to some extent their stock prices.

Chemical stock prices, as measured by the C&EN stock price index, have advanced more than 24% above closing prices a year ago on Black Monday, Oct. 19, 1987. On that day, the market crashed and the Dow Jones Industrial Average declined 508 points, almost 23%.

The situation looked baleful then, when the C&EN index dropped 107 points, or 20% on the day, to 423 (1957 = 100). But as of Oct. 7 this year, this index has recovered to within a few points of its close on the Friday before Black Monday.

The chemical index, however, is currently 20% below the 1987 high of 630, attained on Oct. 2, just 17 days before the crash. The C&EN index is based on the weighted market value of the stocks of American Cyanamid, Dow Chemical, W. R. Grace, Hercules, Monsanto, Rohm & Haas, and Union Carbide.

However, although business may be good for commodity chemical makers, producers of many downstream products such as polyester fiber are unable to raise prices fast enough to preserve their profit margins. And fears that an increase in the number of basic chemical plants planned for the near future will produce a glut of basic petrochemicals have discounted the price that skittish investors will pay for the stocks of commodity producers at this late stage of the commodity chemicals market cycle.

The high prices investors were willing to pay in early October 1987 for many chemical company stocks may have been an anomaly. It was an unrealistic and euphoric outlook that drove the Dow Jones average to a high of 2709 on Aug. 21, 1987. Presumably driving this climb was the theory that U.S. assets were undervalued relative to their valuation in Japan, and the belief that the Japanese would continue to finance not only the market's rise but also the national debt. Chemical companies benefited from much the same euphoria, and suffered much the same drop in valuation as the whole market when that market psychology changed.

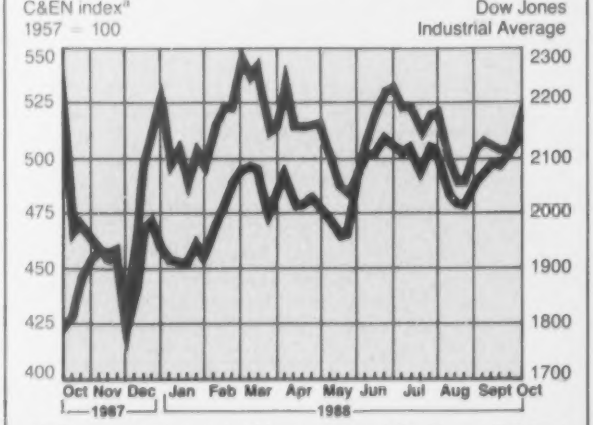
C&EN's chemical stock index shows that the market has valued its underlying stocks at least marginally better than those on the Dow Jones average (which is up almost 24%) and the New York Stock Exchange Composites Index (up 22%). And chemical stocks have done appreciably better than the securities represented in the Over-the-Counter Industrials Index (up 3.6%), as well as the Over-the-Counter Composite Index (up 7.1%).

Marc Reisch

Chemical stock index outperforms other major indexes

	Oct. 19, 1987	Oct. 7, 1988	% change
C&EN chemical stock index	423	525	24.1%
Dow Jones Industrial Average	1738.74	2150.25	23.7
New York Stock Exchange Composite	128.62	156.81	21.9
New York Stock Exchange Industrials	153.47	188.82	23.0
American Stock Exchange Index	282.50	303.82	7.5
Over-the-Counter Composite	360.21	385.67	7.1
Over-the-Counter Industrials	369.73	383.19	3.6
Standard & Poor's 500	224.84	278.07	23.7
Standard & Poor's 400 Industrials	257.81	319.17	23.8

Chemical stocks have outperformed major industrial stocks since October crash



[a] C&EN weighted stock price index of American Cyanamid, Dow Chemical, W. R. Grace, Hercules, Monsanto, Rohm & Haas, and Union Carbide